

In 29th report, p. 17. President's Annual Address delivered on the occasion of the 25th Anniversary of the Montreal Branch.

In Entomological News, Vol. XVIII, p. 420, is an able article on *Thecla calanus* and *T. edwardsii* (with the footnote that it was read before the Ent. Soc. of Ontario at Guelph, July 4, 1907).

In Vol. VII, 172. On occurrence of *Chionobas tarpeia* in North America.

Several short items also appear, including one regarding *Erebria discoidalis* in the first volume, p. 146.

NEW OR LITTLE KNOWN SPECIES OF APHIDIDÆ.

BY JOHN J. DAVIS, BUREAU OF ENTOMOLOGY, WASHINGTON, D. C.

(Continued from p. 173.)

Symdobius albasiphus, n. sp.

This very interesting plant-louse was first taken by the writer on white oak (*Quercus alba*), at Elgin, Illinois, August 30, 1910. The past year (Sept. 10, 1913), the wingless females were found quite common on white oak at Lafayette, Indiana, and October 8, 1913, at the same place, the wingless oviparous females and winged males were observed. In all cases the plant-louse was found on the leaves near the leaf petiole, usually on the under surface of the leaf, and invariably attended by the ant, *Cremastogaster lineolata* Say.* We have found only the apterous forms of the viviparous generation, but Mr. J. T. Monell collected three winged individuals of this species on oak petioles at Mine la Motte, Missouri, June 28, 1890, and our description of this form is taken from these specimens and the notes accompanying them, through the kindness of Mr. Monell. I have recently received an oviparous female of this species from Mr. A. C. Baker, accompanied by the following note: "On white oak, Vienna, Va., Oct. 4, 1912. Ants had built a mud nest over the aphids to protect them. This nest was on the upper side of the leaf, covering nearly half of it." The first, and so far as we are aware, the only published reference to this species is by Dr. Thomas in the Eighth Report of the State Entomologist of Illinois (1879, p. 118), where the apterous females are described as *Lachnus quercifoliæ* Fitch, from specimens collected on white oak

*Kindly determined by Dr. W. M. Wheeler.

July, 1914

at Carbondale, Illinois, in August. As will be readily noticed, this is not the species designated *quercifoliæ* by Fitch.

Although apparently not a typical member of the genus *Symdobius*, the species under consideration seems to best belong there.

Wingless viviparous female:

General colour dark brown. Head and prothorax brownish yellow to light reddish brown; mesothorax usually concolorous or but slightly darker; metathorax with a dark brown longitudinal area on each side, the remaining areas greenish brown; abdomen dark brown with irregular paler greenish brown areas, apparently due to the pale greenish young within the body; sometimes the metathorax and entire abdomen shining dark brown, almost black. Body sparsely clothed with *Chaitophorus*-like hairs, more prominent at posterior end.

Eyes maroon colour. Antennæ scarcely more than one half the body length; almost naked; segment III longest, and the filament of VI shorter than the basal portion of that segment; only the usual distal sensoria on V and base VI; segment I and II dusky, III and IV pale, with a barely noticeable duskiness at tip, V pale and dusky at tip, VI, base, with the basal half pale, the distal half and all of filament VI blackish (Pl. XVIII, fig. 49). Beak pale yellow, the extreme tip dusky; reaching to the coxæ of the second pair of legs. Two fore pairs of legs whitish, the joints often dusky and the distal half of tarsus blackish; hind pair blackish, excepting the distal half of tibia, which is paler. In life the cornicles are rather conspicuous because of their pure white colour, as though covered with a heavy white pulverulence; quite small, the opening narrow; slightly cone-shaped, and inconspicuous in mounted specimens (Pl. XVIII, fig. 50). Cauda a rather inconspicuous rounded protuberance, pale yellowish and hairy; anal plate bilobed, moderately deeply emarginate and the lobes robust and hairy (Pl. XVIII, fig. 51).

Measurements from six individuals in balsam: Length of body 1.4 to 1.9 mm., average 1.6 mm.; width 0.8 to 1.0, average 0.9 mm.; antenna I, 0.069; II, 0.052; III, 0.191 to 0.278, average 0.234; IV, 0.139 to 0.182, average 0.157; V, 0.157 to 0.191,

average 0.174; VI, base, 0.113 to 0.139, average 0.125; VI, filament, 0.070 to 0.087, average 0.080; total average length 0.891 mm.

Winged viviparous female:

Head (Pl. XVIII, fig. 52) and thorax dark brown to blackish. Abdomen brown with a central longitudinal whitish yellow stripe. Body very sparsely hairy, the tip of abdomen, including cauda and anal plate, more noticeably hairy. Antennæ shorter than body; relative antennal lengths as in the apterous; segment III bearing 7 to 8 rather large circular sensoria in a row, the usual distal ones on V and base VI (Pl. XVIII, fig. 53). Wings hyaline, veins narrow, an almost imperceptible duskiness at tips of veins; terminal branch of media variable, sometimes branching near apex of wing and sometimes nearer to the point where this vein first branches. Cornicles whitish, slightly narrower at tip than at base, about as long as broad and quite inconspicuous in mounted specimens. Cauda broadly rounded and anal plate bilobed as in the apterous form (Pl. XVIII, fig. 54).

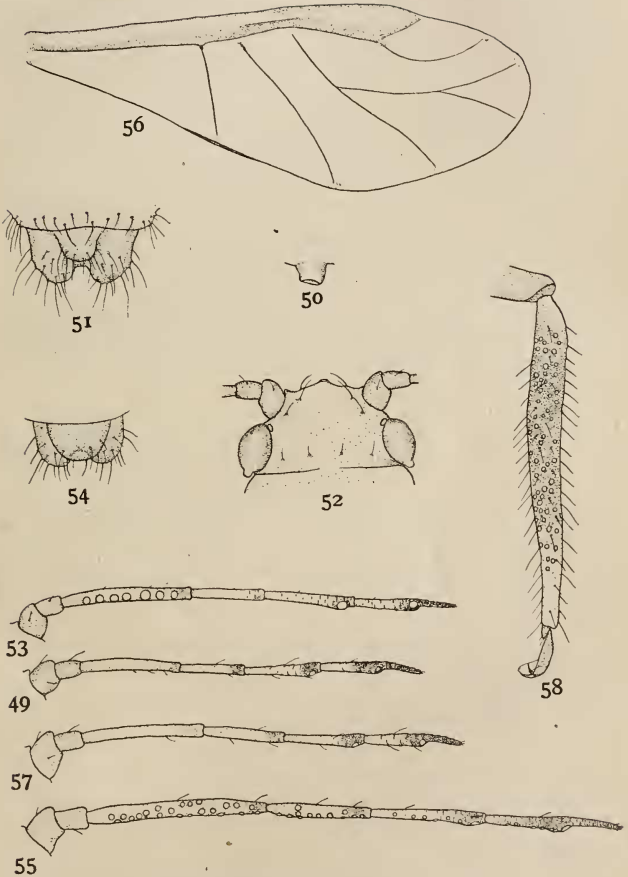
Measurements from three specimens in balsam, the bodies somewhat shrivelled. Average length of body 1.16 mm.; average width 0.57 mm.; length of wings approximately three times their width; antenna I, 0.06; II, 0.05; III, 0.261 to 0.295, average 0.278; IV, 0.156 to 0.174, average 0.165; V, 0.182 to 0.200, average 0.191; VI, base, average 0.122; VI, filament 0.078 to 0.096, average 0.087; average total length 0.953 mm.

Immature:

The young is whitish green with pale olive green markings, as follows: A U-shaped marking the bottom of which extends to and usually includes the first abdominal segment and the top of which reaches the prothoracic segment. A longitudinal area on each side of the abdomen and about in line with the cornicles, but not quite reaching to them. Another marking just posterior to the cornicles. Cornicles white as in the adult.

Winged male:

Head and thorax dark brown to blackish. Abdomen pale pea-green with a dorsal median longitudinal marking and an area



SYMDOBIUS ALBASIPHUS, n. sp.

around each cornicle of a paler green. Body with only a few sparsely-placed hairs.

Eyes dark red. Antennæ a little more than half the body length; relative lengths of segments as in other forms: I and II pale dusky, III, IV, V and base of VI pale with blackish tips, and all of VI filament black; segment III bearing 23 to 30 irregularly-placed circular sensoria, IV with 8 to 13, V with 5 to 9, not including the usual distal one, and VI base with 2 to 4, usually in a row, exclusive of the usual distal ones; sparsely hairy (Pl. XVIII, fig. 55). Fore pair of legs pale, with the tip of tarsus blackish; middle pair similarly coloured, but with the femur dusky towards the tip; hind pair with femur blackish except at base, tibia blackish except towards tip, and apex of tarsus black. Wings as in the winged viviparous female (Pl. XVIII, fig. 56). Cornicles as described for the other forms. Cauda pale green, covered with a rather heavy pulverulence, hairy, and similar in shape to those of the other forms. Anal plate rounded (not bilobed as in the viviparous forms) and hairy.

Measurements from six individuals mounted in balsam, as follows: Length of body 1.32 to 1.82, average 1.51 mm.; width 0.46 to 0.58, average 0.54; length of wing, average 2.28 mm.; width, average 0.82 mm.; antenna I, 0.061; II, 0.054; III, 0.296 to 0.322, average 0.315; IV, 0.174 to 0.217, average 0.197; V, 0.200 to 0.235, average 0.217; VI, base, 0.122 to 0.148, average 0.138; VI, filament 0.087 to 0.104, average 0.092; total average length 1.074.

Wingless oviparous female:

Body mottled with green and black, but to the naked eye it appears to be largely blackish. Head and first two thoracic segments of a light reddish to pinkish tint; remainder of body blackish, with a more or less distinct median dorsal line of pale yellowish green or whitish green, sometimes even with a faint pinkish tint. Laterad of the median paler area are dots of the same colour intermixed with the black; also a pale area around the cornicles. Body moderately sparsely clothed with medium-length hairs as in the wingless viviparous female.

Eyes maroon red. Antennæ approximately one-half the length of the body; relative lengths of segments as in the other

forms; very sparsely hairy; segment I concolorous with head, II pale with a slight duskiess, III, IV, V and base VI pale with blackish tips, VI filament black; sensoria as in the wingless viviparous female (Pl. XVIII, fig. 57). Beak reaching to coxæ of second pair of legs. Fore pair of legs entirely pale, excepting distal end of tarsus; middle pair with femur dusky to blackish except at base; hind pair as the middle pair, but the tibia dusky except at tip; hind tibiæ noticeably swollen and bearing many irregularly placed circular sensoria (Pl. XVIII, fig. 58). Cornicles white as in other forms. Cauda pale with greenish tint, anal plate rounded as in the male.

Measurements from six individuals, as follows: Length of body 1.63 to 2.01, average 1.81 mm.; width 0.96 to 1.12, average 1.04 mm.; antenna I, 0.069; II, 0.060; III, 0.269 to 0.313, average 0.290; IV, 0.148 to 0.200, average 0.179; V, 0.174 to 0.209, average 0.186; VI, base, 0.113 to 0.139, average 0.130; VI, filament 0.070 to 0.090, average 0.078; total average length 0.992 mm.

Egg:

The egg is very pale greenish when first laid, later changing to black.

***Aphis pseudobrassicæ*, n. sp.**

This species was first received by us from Mr. W. J. Schoene, who found occasional specimens on cabbage at Geneva, New York, July 15, 1912. Later in the year (Nov. 20, 1912), a correspondent sent us specimens collected at Evansville, Indiana, with the note that they were abundant on kale and mustard, and that "these same insects have been bothering our turnips and turnip greens, destroying large portions of the patches. It does not bother on spring greens, only on fall crops." In the lot received from Evansville were *Myzus persicæ* and *Aphis pseudobrassicæ* in about equal numbers.

The past fall (September and October, 1913) we have found it at Lafayette, Indiana, abundant on radish and turnip and in the insectary it bred rather freely on rape, although the two former seem to be the preferred host plants. Mr. F. B. Paddock has also found it abundant on turnip at College Station, Texas, and has kindly forwarded specimens to us. No doubt further collections

will show this species to be generally distributed over the country and since it closely resembles *Aphis brassicæ* it has likely been mistaken for this species in some instances.

The fact that the winged viviparous female bears sensoria on segment IV. of the antenna, alone separates it from *brassicæ*. The sexes have not been found and our present knowledge leads us to believe that the more usual means of passing the winter is as viviparous females.

Wingless viviparous female. (Fig. 21).

Entire body pale whitish green, head slightly dusky. Abdomen with a longitudinal row of impressed dots along each side in

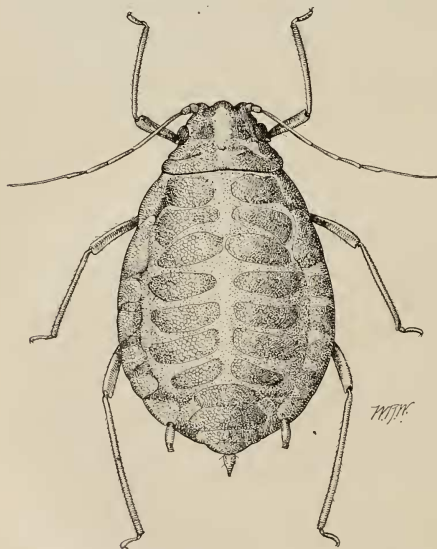


Fig. 21.—*Aphis pseudobrassicæ*, wingless viviparous female.

line with the cornicles; also on each side of the median dorsal line is a row of transverse shining areas with a reticulated surface, those on the last four or five segments usually united; and a similar row of smaller areas on each side. These shining reticulated areas contrast with the rest of the body which is dull and very slightly pulverulent. Thoracic segments with similar transverse areas. In specimens

just molted the entire body appears shining and reticulated.

Eyes black. Antennæ blackish excepting segments I, II and basal half of III which are pale; reaching a little beyond the

middle of the body; segment III longest, it being a half to three fourths longer than VI filament; segments V and VI base with the usual distal sensoria. Beak reaching to coxæ of second pair of legs. Legs pale with dusky joints, the tips of the tibiæ and all of the tarsi black. Cornicles pale with the tip dusky, slightly swollen towards the tip and constricted just before the apex, and noticeably longer than the cornicles of *A. brassicæ*. Cauda conical, and dusky to blackish.

Measurements, as follows (averages from six individuals): Length of body 1.66 mm.; width 1.00 mm.; cornicle 0.226 mm.; cauda 0.140 mm.; antenna I, 0.080; II, 0.061; III, 0.399; IV, 0.202; V, 0.160; VI, base 0.122; VI, filament 0.287; total average length 1.311 mm.

Pupa.

Head dusky, remainder of body cream colour or with a faint greenish tint, and covered with a slight whitish pulverulence, excepting the shining areas which are covered with a noticeable reticulation, and which are placed as follows—a row of oval or transverse areas on each side of the median dorsal line and a row of smaller and more circular ones laterad of these on each side, about in line with the cornicles.

Eyes black. Antennæ pale dusky, the distal ends of segments being more so, relative lengths of segments as in the winged female. Wing pads blackish. Legs pale dusky with the joints, distal end of tibiæ and tarsus blackish. Cornicles dusky, paler at middle, blackish at tips, and similar in shape to those of the wingless female.

Winged viviparous female. (Fig. 22).

Head and thorax black. Abdomen pale apple green with a tint of Nile green and a row of three black spots on each side anterior to the cornicles; a row of small impressed dots on each side dorsad of the larger spots; and in addition a few scattered inconspicuous dusky markings on the dorsum, and the last three segments with black transverse, dorsal median markings.

Eyes black. Antennæ black; almost reaching to base of cornicles; segments III and VI filament subequal; segment III with 19 to 26 moderately tuberculate circular sensoria irregularly placed,

IV with 6 to 10, often more or less in a row, V and VI base with the usual distal sensoria and not infrequently segment V bears one or two near the base (Fig. 22a). Wings with black and rather conspicuous veins, and the terminal branch of the media nearer the

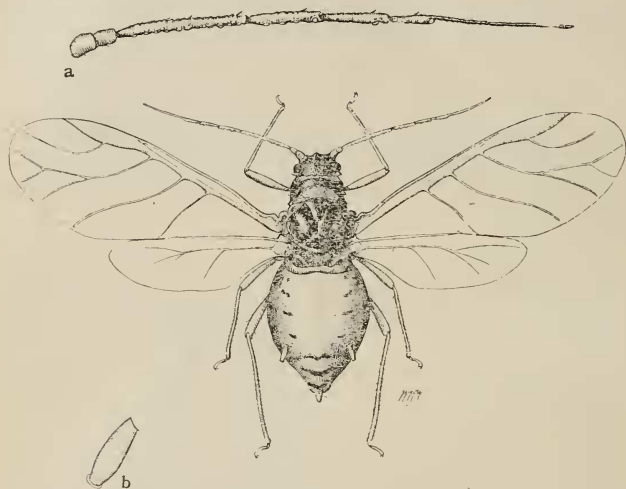


Fig. 22. — *Aphis pseudobrassicæ*. winged viviparous female; a. antenna of same, enlarged; b. cornicle of same, enlarged.

apex of wing than where it first branches. Legs with femur pale brownish to blackish, tibia pale brownish with tip black and tarsus black. Cornicles dusky, paler at tips, and shaped as in the wingless form (Fig. 22b). Cauda concolorous with the abdomen or paler. Measurements as follows (averages from six individuals): Length of body 1.4 mm.; width of body 0.66 mm.; length of wing 2.4 mm.; width of wing 0.9 mm.; antenna I, 0.069; II, 0.061; III, 0.363; IV, 0.191; V, 0.165; VI, base 0.126; VI, filament 0.358; total average length 1.333 mm.; length of cornicles 0.172 mm.; of cauda 0.134 mm.

Descriptions made from specimens collected on radish, turnip, and rape, at Lafayette, Indiana.

DIRECTIONS FOR SENDING LIVING APHIDS.

It is desirable, in sending aphids for determination, that living individuals be submitted when possible. We have found the following method to be the most satisfactory of several tried:

Place a portion of the plant bearing the aphids in a glass vial and with it a strip of filter paper, the size depending on the size of vial and quantity of foliage placed within it. The vial is then tightly stoppered with a cork and placed in a mailing tube or substantial box for mailing. Always have the stem of the plant and the end of the filter paper sufficiently long so that they will be held by the cork; otherwise the loose foliage and twigs will shake about and may crush the aphids. By this method we have shipped living specimens 1,700 miles and had them reach their destination in excellent shape. Tin salve boxes also make excellent shipping boxes for living aphids. Shipments of this nature should always be accompanied by full data, such as name of food plant, locality, date, part of plant affected, and collector.

All of the illustrations in this paper are by Dr. Henry Fox, excepting figures 10, 21, and 22, which are by Mr. W. R. Walton and figures 43 and 45 to 48 inclusive of plate VII and all of plate XVIII, which are the author's.

EXPLANATION OF PLATES.

Plate II. *Macrosiphum creelii* n. sp.—Figure 1 antenna, and 2 cornicle of wingless viviparous female; 3 head and 4 antenna of winged viviparous female.

Macrosiphum coryli n. sp.—5 head, 6 antenna and 7 cauda of wingless viviparous female; 8 antenna, 9 wing, and 10 cornicle of winged viviparous female.

Plate IV. *Macrosiphum venafuscæ* n. sp.—11 head, 12 antenna and 13 cauda of wingless viviparous female, 14 head, 15 antenna, 16 wing, and 17 cornicle of winged viviparous female; 18 antenna of winged male; 19 antenna and 20 hind tibia of wingless oviparous female.

Plate V. *Macrosiphum tilie* Monell.—21 head, 22 antenna and 23 cornicle of wingless viviparous female; 24 antenna of winged male; 25 hind tibia of wingless oviparous female.

Myzus lycopersici Clarke.—26 antenna of wingless viviparous female; 27 antenna, 28 head, 29 cornicle and 30 cauda of winged viviparous female; 31 antenna of winged male; 32 antenna of oviparous female.

Plate VII. *Myzus lycopersici* Clarke.—33 hind tibia of wingless oviparous female.

Rhopalosiphum howardii Wilson.—34 antenna of wingless viviparous female; 35 head, 36 wing, 37 cornicle, 38 cauda and 39 antenna of winged viviparous female; 40 antenna of winged male.

Eulachnus rileyi Williams.—41 antenna of wingless viviparous female; 42 head, 43 antenna, 44 beak, 45 wing and 46 hind tarsus of winged viviparous female; 47 antenna of winged male, 48 hind tibia of wingless oviparous female.

Plate XVIII. *Symdobius albasiphus* n. sp.—49 antenna, 50 cornicle and 51 cauda and anal plate of wingless viviparous female; 52 head, 53 antenna and 54 cauda and anal plate of winged viviparous female; 55 antenna and 56 wing of winged male; 57 antenna and 58 hind tibia of wingless oviparous female.

REPORT ON A COLLECTION OF JAPANESE CRANE-FLIES (*TIPULIDÆ*, *DIPTERA*).

BY CHARLES P. ALEXANDER, ITHACA, N. Y.

(Continued from p. 211.)

Tipula nipponensis, sp. n.

Head yellowish; thorax yellow with brown stripes; abdomen with the caudal margin of the segments broadly brown; wings variegated gray, brown and hyaline.

Male: Length 12.8 mm.; wing 13.6 mm.; antennæ about 4 mm.

Female: Length 13–14.1 mm.; wing 14.2–15.2 mm.

Male: Palpi brown, the terminal segment very long and pale; frontal prolongation of the head very short and stout, yellowish; antennæ, segments 1 and 2 yellow, flagellar segments with the somewhat enlarged base dark brown, the remainder of each segment dull yellow; front, vertex and occiput dull yellow, the sides of the vertex and the genæ dark brown.

Pronotum pale; mesonotum dull yellow with dark brown stripes, the median one bisected by a pale line, lateral stripes short,